

REMARKS

Claims 5, 10, 17, 22, 24, 30, 32, and 34 have been amended.

No Claims have been cancelled.

Claims 1-40 are currently pending in this application.

Claims 1, 10, 16, 21, 24, 28, 30, 32, 33, 34, 36, 37, and 40 are in independent format.

1. Double Patenting

The Examiner's double-patenting rejection of Claims 1-4, 7, and 16 under 35 U.S.C. § 101 as claiming the same invention as that of Claims 1-4 of prior U.S. Patent No. 6,481,282 to *Douglas et al.* is respectfully traversed.

In determining whether a statutory basis for a double patenting rejection exists, the question to be asked is: Is the same invention being claimed twice? ... A reliable test for double patenting under 35 U.S.C. § 101 is whether a claim in the application could be literally infringed without literally infringing a corresponding claim in the patent. *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970). Is there an embodiment of the invention that falls within the scope of one claim, but not the other? If there is such an embodiment, then identical subject matter is not defined by both claims and statutory double patenting would not exist. MPEP §804.II.A.

a. Claim 1

In the instant application, it is readily apparent that Claim 1 may be literally infringed without literally infringing Claim 1 of the '282 *Douglas et al.* patent. Claim 1 of the present application sets forth a method for centering a rotating body on a balancer, and includes the required steps of obtaining first and second measurements of at least one imbalance parameter of the rotating body.

In contrast, Claim 1 of the '282 *Douglas et al.* patent sets forth a method for centering a wheel on a balancer, and includes the requires steps of obtaining first and second measurements of run-out of the wheel.

The measurements required by the method of Claim 1 of the present application are distinctly different from the measurements required by the method of Claim 1 of the '282 *Douglas et al.* patent, i.e., wheel run-out is not an imbalance parameter of a rotating body. A rotating body may be perfectly balanced, but have a measurable run-out. Run-out of a wheel, typically described as either radial or axial runout, is a variation in the radial or axial distance from a wheel surface to a fixed point on the axis of rotation of the wheel as the wheel is rotated about the axis of rotation, and is independent of any imbalance of the wheel. In contrast, an imbalance parameter, as defined at ¶0044 is "... a raw force transducer output, an imbalance magnitude, an imbalance angular location, or the mass of the rotating body."

Accordingly, since it is clear that the method of Claim 1 of the present application could be literally infringed without literally infringing Claim 1 of the '282 *Douglas et al.* patent, i.e. by obtaining first and second measurements of an imbalance magnitude, the double patenting rejection of Claim 1 under 35 U.S.C. § 101 is improper, and is respectfully requested to be withdrawn.

b. Claims 2-4 and 7

Claims 2-4 and 7 each depend directly or indirectly from independent Claim 1, and accordingly, incorporate each and every limitation of independent Claim 1, including the limitations discussed above requiring first and second measurements of an imbalance parameter. Accordingly, since it is clear that the method of Claim 1 of the

present application could be literally infringed without literally infringing Claim 1 of the '282 *Douglas et al.* patent, the double patenting rejections of Claims 2-4 and 7 under 35 U.S.C. § 101 are similarly improper, and are respectfully requested to be withdrawn.

Claim 16

Similar to independent Claim 1, independent Claim 16 of the present application may be literally infringed without literally infringing Claim 1 of the '282 *Douglas et al.* patent. Claim 16 of the present application sets forth a method for centering a wheel assembly on a wheel balancer, and includes the required steps of obtaining first and second measurements of runout of the rim-mounted tire.

In contrast, Claim 1 of the '282 *Douglas et al.* patent sets forth a method for centering a wheel on a balancer, and includes the requires steps of obtaining first and second measurements of run-out of the wheel.

As is common practice in the automotive service industry, the terms “wheel” and “tire” refer to separate components of a wheel assembly or wheel/tire assembly. The “wheel” is the rigid structural supporting member which is traditionally configured for attachment to a wheel hub on a vehicle. The “tire” is the removable, flexible component which is traditionally disposed about an outer circumference of the wheel, and contacts the surface on which the vehicle is disposed.

The method set forth and claimed in the '282 *Douglas et al.* patent requires measurement of the run-out of the wheel, not the run-out of the rim-mounted tire. Referring to Col. 7, line 45 – Col. 8. line 9, it is clearly seen that the centering check method of the '282 *Douglas et al.* patent requires runout measurements associated with the wheel rim surfaces, such as the wheel rim lip or wheel bead seat, and that the tire is

not even required to be mounted to the wheel rim at the time of the run-out measurements.

Accordingly, since it is clear that the method of Claim 16 of the present application could be literally infringed without literally infringing Claim 1 of the '282 *Douglas et al.* patent, i.e. by obtaining first and second measurements of tire run out, the double patenting rejection of Claim 16 under 35 U.S.C. § 101 is improper, and is respectfully requested to be withdrawn.

2. Rejections Under 35 U.S.C. § 102(e)

The Examiner's rejections of Claims 1-9, 11-23, 25-29, 31, and 33 under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 6,481,282 B2 to *Douglas et al.* are respectfully traversed.

The MPEP §2131 provides:

A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described in a single prior art reference." *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). "The identical invention must be shown in as complete detail as contained in the ... claim." *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989). The elements must be arranged as required by the claim.

a. Claims 1-9 & 11-15

Contrary to the Examiner's statement that all of the required steps of the method set forth in of independent Claim 1 and further expanded in dependent Claims 2-9 and 11-15 are disclosed in the '282 *Douglas et al.* patent, the required steps of obtaining first and second measurements *of at least one imbalance parameter* of the rotating

body are not. Hence, the rejection of Claims 1-9 and 11-15 is unsupported by the '282 *Douglas et al.* patent, and should be withdrawn.

Claim 1 of the present application sets forth a method for centering a rotating body on a balancer. The method requires the step of obtaining a first measurement of at least one *imbalance parameter* of the rotating body on the spindle, and the step of obtaining a second measurement of the *imbalance parameter* after altering the mounting of the rotating body on the spindle. In contrast, the '282 *Douglas et al.* patent sets forth a method for centering a wheel on a balancer which requires the steps of obtaining first and second measurements of run-out of the wheel. (Claim 1, Col. 7, line 55 – Col. 8, line 9).

The measurements required by the method of Claim 1 of the present application are distinctly different from the measurements required by the method of Claim 1 of the '282 *Douglas et al.* patent, i.e., wheel run-out is not an imbalance parameter of a rotating body. Run-out of a wheel, typically described as either radial or axial runout, is a variation in the radial or axial distance from a wheel surface to a fixed point on the axis of rotation of the wheel as the wheel is rotated about the axis of rotation, and is independent of any imbalance of the wheel. In contrast, an imbalance parameter defined at ¶0044 of the Specification, is "... a raw force transducer output, an imbalance magnitude, an imbalance angular location, or the mass of the rotating body," and does not include wheel run-out.

Accordingly, since the '282 *Douglas et al.* reference fails to disclose all of the required steps set forth in independent Claim 1 of the present application, the rejection of Claim 1 under 35 U.S.C. § 102(e) is unsupported, and should be withdrawn.

Dependent Claims 2-9 and 11-15 each depend either directly or indirectly from independent Claim 1, and accordingly, each require the same method step of obtaining a first measurement of at least one *imbalance parameter* of the rotating body on the spindle, and the step of obtaining a second measurement of the *imbalance parameter* after altering the mounting of the rotating body on the spindle. Amendments to Claim 5 clarify the measurement is of an *imbalance parameter*. Since the '282 *Douglas et al.* reference fails to disclose all of the required steps set forth in independent Claim 1 of the present application, the rejections under 35 U.S.C. § 102(e) of dependent Claims 2-9 and 11-15, which depend either directly or indirectly from Claim 1, are unsupported, and should be withdrawn for the same reasons, and for the additional reasons set forth below.

With regards to Claim 9, the Examiner has stated that the '282 *Douglas et al.* patent discloses that sensors (88 and 97) measure axial and radial wheel rim runout that includes a magnitude. (Office Action, Page 4). However, wheel rim runout magnitude is distinct from an imbalance magnitude of a rotating body, as required in Claim 9. A wheel rim runout magnitude is a measure of distance, while an imbalance magnitude is a measure of mass.

With regards to Claim 12, the Examiner has stated that the '282 *Douglas et al.* patent discloses that sensors (88 and 97) measure axial and radial wheel rim runout that includes a angle. (Office Action, Page 4). However, an angular measurement of wheel rim runout is unrelated to an angular measurement of an imbalance angular location about a rotating body, as required in Claim 12. A wheel rim runout angular measurement is a identification of a runout peak or valley about the circumference of

the wheel, while an imbalance angular location is an identification of a location of maximum imbalance force about the circumference of the rotating body.

b. Claims 16-20

Contrary to the Examiner's statement that all of the required steps of the method set forth in independent Claim 16 and further expanded in dependent Claims 17-20 are disclosed in the '282 *Douglas et al.* patent, the required steps of obtaining first and second measurements of *runout of the rim-mounted tire* are not. Hence, the rejection of Claims 16-20 is unsupported by the '282 *Douglas et al.* patent, and should be withdrawn.

In contrast, the method of centering a wheel on a balancer set forth and claimed in the '282 *Douglas et al.* patent requires measurement of the run-out of *the wheel*, not the run-out of the *rim-mounted tire*. Referring to Col. 7, line 45 – Col. 8, line 9, it is clearly seen that the centering check method of the '282 *Douglas et al.* patent requires runout measurements associated with the wheel rim surfaces, such as the wheel rim lip or wheel bead seat, and that the tire is not even required to be mounted to the wheel rim at the time of the run-out measurements. (Col. 8, lines 17-19).

Accordingly, since the '282 *Douglas et al.* reference fails to disclose all of the required steps set forth in independent Claim 16 of the present application, the rejection of Claim 16 under 35 U.S.C. § 102(e) is unsupported, and should be withdrawn.

Dependent Claims 17-20 each depend either directly or indirectly from independent Claim 16, and accordingly, each require the same method steps of obtaining a first and second measurements of the run-out of the *rim-mounted tire*. Claim 17 has been amended to clarify that the measurement is of the runout of the *rim-*

mounted tire. Since the '282 *Douglas et al.* reference fails to disclose all of the required steps set forth in independent Claim 16 of the present application, the rejections under 35 U.S.C. § 102(e) of dependent Claims 17-20, which depend either directly or indirectly from Claim 16, are similarly unsupported, and the rejections should be withdrawn for the same reasons.

c. Claims 21-23 and 25-27

Contrary to the Examiner's statement that all of the required steps of the method set forth in of independent Claim 21, and further expanded in dependent Claims 22, 23, and 25-27, are disclosed in the '282 *Douglas et al.* patent, the required steps of establishing an imbalance threshold and providing a display of a calculated imbalance in relation to the established imbalance threshold are not. Hence, the rejection of Claims 21-23 and 25-27 is unsupported by the '282 *Douglas et al.* patent, and should be withdrawn.

The Examiner has not specifically identified any disclosure in the '282 *Douglas et al.* patent which supports a rejection under 35 U.S.C. § 102(e) of Claims 21-23 and 25-27. At Col. 8, lines 5-9, the '282 *Douglas et al.* patent describes a procedure for checking the centering of a wheel mounting on a balancer which includes the step of comparing a set of measurements to a "preset amount (a predetermined threshold)". However, the predetermined threshold described at Col. 8, lines 5-9 is associated with measurements of wheel rim run-out, and is not an imbalance threshold, as required by independent Claim 21. Furthermore, there does not appear to be any disclosure in the '282 *Douglas et al.* reference of the step of displaying a *calculated imbalance in relation to an established imbalance threshold*.

Accordingly, since the '282 *Douglas et al.* reference fails to disclose all of the required steps set forth in independent Claim 21 of the present application, the rejection of Claim 21 under 35 U.S.C. § 102(e) is unsupported, and should be withdrawn.

Dependent Claims 22, 23, and 25-27 each depend either directly or indirectly from independent Claim 21, and accordingly, each require the same method steps of establishing an imbalance threshold and providing a display of a calculated imbalance in relation to the established imbalance threshold. Since the '282 *Douglas et al.* reference fails to disclose all of the required steps set forth in independent Claim 21 of the present application, the rejections under 35 U.S.C. § 102(e) of dependent Claims 22, 23, and 25-27, which depend either directly or indirectly from Claim 21, are similarly unsupported, and rejections should be withdrawn for the same reasons, and for the additional reasons set forth below.

Dependent Claim 22 has been to clarify that the step of establishing an imbalance threshold establishes an imbalance threshold which is based on one or more dimensional characteristics of the rotating body. In contrast, the '282 *Douglas et al.* reference fails to provide any disclosure regarding the establishment of an imbalance threshold, and fails to describe any basis for the determination of the runout variation threshold described at Col. 8, lines 5-9.

d. Claims 28, 29, 31, and 33

Contrary to the Examiner's statement that all of the required steps of the method set forth in of independent Claim 28, and further expanded in dependent Claims 29, 31, and 33, are disclosed in the '282 *Douglas et al.* patent, the required step of calculating an imbalance correction weight threshold level for each of the imbalance parameters,

utilizing an identified dimension of the rotating body and a selected associated imbalance limit is not. Hence, the rejection of Claims 28, 29, 31, and 33 is unsupported by the '282 *Douglas et al.* patent, and should be withdrawn.

The Examiner has not specifically identified any disclosure in the '282 *Douglas et al.* patent which specifically supports a rejection under 35 U.S.C. § 102(e) of Claims 28, 29, 31, and 33. While the Examiner has identified that the '282 *Douglas et al.* reference discloses identifying a dimension of a rotating body, determining a magnitude and position of an imbalance correction weight, and determining a "threshold amount", these disclosed elements are disjoint and are not utilized as required by the limitations of Claim 28. Furthermore, the "threshold amount" disclosed in the '282 *Douglas et al.* patent, described at Col. 8, lines 5-9, is associated with measurements of wheel rim run-out, and is not an imbalance correction weight threshold level, as required by independent Claim 28. Hence, the '282 *Douglas et al.* patent fails to disclose the required step of calculating an imbalance correction weight threshold level for each of the imbalance parameters utilizing an identified dimension of the rotating body together with a selected associated imbalance limit, and the rejection of Claim 28 under 35 U.S.C. § 102(e) is unsupported.

Dependent Claims 29, 31, and 33 each depend either directly or indirectly from independent Claim 28, and accordingly, each require the same method step of calculating an imbalance correction weight threshold level for each of the imbalance parameters utilizing an identified dimension of the rotating body together with a selected associated imbalance limit. Since the '282 *Douglas et al.* reference fails to disclose the required step set forth in independent parent Claim 28, the rejections under 35 U.S.C. §

102(e) of dependent Claims 29, 31, and 33, which depend either directly or indirectly from Claim 28, are similarly unsupported, and rejections should be withdrawn for the same reason.

3. Allowable Subject Matter

The Examiner's indication that Claims 34-40 are allowed as written is respectfully acknowledged.

Applicant notes that original Claim 34 is written in dependent form, and accordingly, Applicant has amended Claim 34 to independent form, incorporating the limitations of parent Claim 33.

The Examiner's objection to Claims 10, 24, 30, and 32 as being dependent upon a rejected base claim, but as containing allowable subject matter if rewritten in independent form including all of the limitations of the base claims and any intervening claims is respectfully acknowledged.

Claims 10, 24, 30, and 32 have been amended to independent form, including all of the limitations of the base claims and any intervening claims.

4. Conclusion

Based on the foregoing, the allowance of claims 1-40 is requested.

If for any reason the Examiner is unable to allow the application on the next Office Action and feels that an interview would be helpful to resolve any remaining issues, the Examiner is respectfully requested to contact the undersigned attorney for the purpose of arranging such an interview.

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